3COM BASELINE PLUS SWITCH 2900 GIGABIT FAMILY

Enterprise-class, Gigabit switches for small and medium businesses, voice ready with PoE and advanced features for network control and flexibility

from top to bottom: 3Com Baseline Plus, Switch 2920, Switch 2928, Switch 2952, Switch 2928 PWR, Switch 2928 HPWR

OVERVIEW

The "smart" voice-ready 3Com® Baseline Plus Switch 2900 Gigabit Family delivers Layer 2 enterprise-class Gigabit switching solutions along with layer 3 static routes, customized and priced for small and mid-sized organizations.

These managed switches offer tremendous value to small and medium businesses looking for a low cost solution who need a level of control over their network not offered by unmanaged switching products, without sacrificing the advanced functionality normally found on higher-end managed switching products.

KEY BENEFITS

LAYER 2 SWITCHING WITH ADVANCED FEATURES

The Baseline Plus Switch 2900 Gigabit Family helps build a voice ready network—with 3Com's unique auto-voice VLAN, advanced voice QoS, SNMP-based management, Power over Ethernet (PoE) and other features.

To ensure optimal use of the network bandwidth and deliver maximum voice and data quality, traffic flow can be directed according to the needs of the business using Spanning Tree and Rapid Spanning Tree, traffic prioritization, priority queuing and VLANs.

Link aggregation can be done via IEEE 802.3ad LACP or manually, allowing ports to be grouped together to form an ultra-high-bandwidth connection that greatly expands bandwidth capacity to the network core or other parts of the network.

Baseline Plus Switch 2900 models are available with 20, 28, and 52 ports; two 28 port PoE models (one with 170W budget and the other with 365W power budget) deliver data and power over the same cabling. Each switch also has four dedicated SFP ports for fiber uplinks over longer distances.

ENTERPRISE-QUALITY SECURITY

Enterprise-quality security is provided with IEEE 802.1X network login and advanced Access Control Lists (ACLs), which enable usage policies via the switch at each point of access to the network. Time based policies can also be configured on these switches. All management communications are encrypted with HTTPS.

POWER OVER ETHERNET

The Baseline Plus Switch 2928 PWR and 2928 HPWR provides inline power to attached devices—access points, Voice over IP (VoIP) phones, IP security cameras, etc.—via industry-standard IEEE 802.3af PoE over a single Ethernet cable, resulting in significant deployment cost savings. These switches also support pre-std PoE plus functionality that will enable the switch to deliver 30W of power on each port.

NO SWITCH SETUP REQUIRED

Baseline Plus Gigabit switches are operational straight out-of-the-box; as long as default settings are acceptable, there is no need to configure the switch. If desired, the switch can be configured using a web browser, console port, or SNMP management software.

ENHANCED INTUITIVE MANAGEMENT OPTIONS

For networks that require more control, the switch web management interface provides an intuitive,

3com®

KEY BENEFITS (continued)

menu-driven process for even novice users to quickly and confidently configure the switch during initial setup and manage it during normal operation. Graphical switch and port views provide a clear understanding of switch status and configuration.

In addition, the web interface features individual port-traffic monitoring (port mirroring) and diagnostic tools like ping and traceroute. A cable diagnostic tool lets users troubleshoot basic connectivity problems via the web management interface further simplifying network installation.

IMC management platform. IMC is our next generation fully integrated comprehensive management platform. It delivers full FCAPS solution as defined by ISO, among other features. IMC management software can be used to map the network topology, indicating what devices are connected, and on what ports. Switch management and software upgrades can be easily done. Other SNMP-based management tools may also be used.

The Switch family also supports a compact Command Line Interface (CLI) that is accessed via the front panel console port. Using the CLI, major switch management options can be quickly configured.

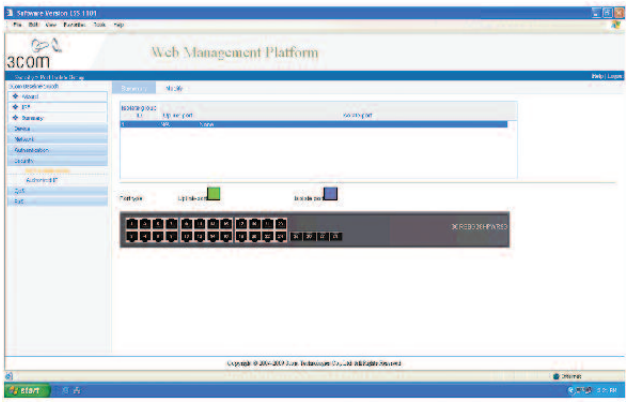
FEATURE HIGHLIGHTS

FEATURE	DESCRIPTION
Performance	
VLANs	Segment the network by grouping users based on their data or traffic exchange requirements. This ensures optimal use of available bandwidth as traffic flow is directed according to the needs of the business.
Advanced QoS and traffic limiting	Traffic prioritization, using IEEE 802.1p Quality of Service (QoS) and Type of Service (TOS) with Differentiated Services Code Point (DSCP), and ingress/egress rate limiting help ensure that critical time-sensitive traffic like voice gets the priority needed for quality communications.
Link aggregation (trunking)	Group together up to 8 ports automatically using Link Aggregation Control Protocol (LACP), or manually, to form an ultra-high-bandwidth connection to the network backbone; help prevent traffic bottlenecks.
Rapid Spanning Tree Protocol (STP/RSTP/MSTP) support	Improves network compatibility, scalability and availability.
IGMP snooping	Multicast filtering optimizes network performance, instead of flooding traffic to all ports.
Unique voice features	Automatic assignment of voice traffic to separate VLANs ("auto-voice VLAN"), advanced voice QoS, traffic limiting, multicast filtering and PoE support delivers the support necessary for quality voice communications.
Fiber uplink	Achieve greater distance connectivity using gigabit fiber uplinks.
Flexible Gigabit uplinks	Daisychain multiple units together via the built-in copper Gigabit uplink ports or connect to a network backbone via SFP-based fiber modules.
PoE support (PWR model only)	Provides power for IP phones, wireless LAN access points, and other IEEE 802.3af-compliant devices over the same cable used for data; lowers total cost of ownership since there is no need to run additional electrical wiring. Note: pre-std PoE Plus is also supported allowing the switch to deliver up to 30W of power.
Security	
IEEE 802.1X network access control	Provides standards-based security combined with local authentication.
Advanced Access Control Lists (ACLs)	MAC- and IP-based ACLs enable network traffic filtering and enhance network control. Time based ACLs allow for greater flexibiliy with managing network access.
Traffic monitoring (port mirroring)	Administrators can examine suspect data streams received on any port by mirroring the data stream to a monitoring port.
Configuration and management	
Enhanced browser-based interface	Graphical user interface allows even the most novice users to configure the switch during initial setup and monitor it during normal operation.
SNMP support	Switch can be managed with 3Com IMC, Network Supervisor, Network Director and other SNMP-compatible tools.
PoE configuration	PoE power can be enabled or disabled per unit and per port; power can also be limited per port.
Cable diagnostics	Remotely detect copper cable issues using a browser-based tool.

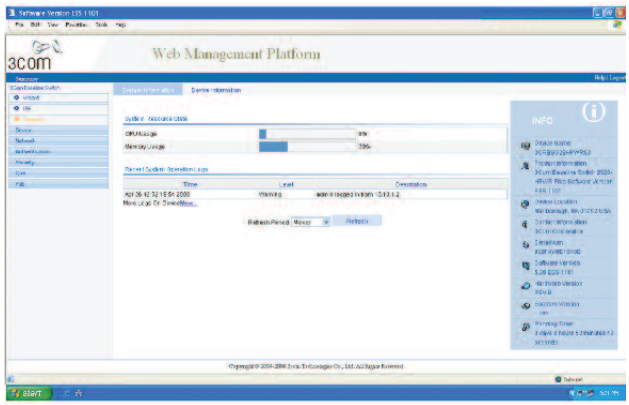
BASELINE PLUS SWITCH 2900 USER INTERFACE

INTUITIVE BROWSER-BASED INTERFACE

With the switch web management interface, even novice users can quickly and confidently configure the switch during initial setup and manage it during normal operation. Graphical switch and port views provide a clear understanding of switch status and configuration.

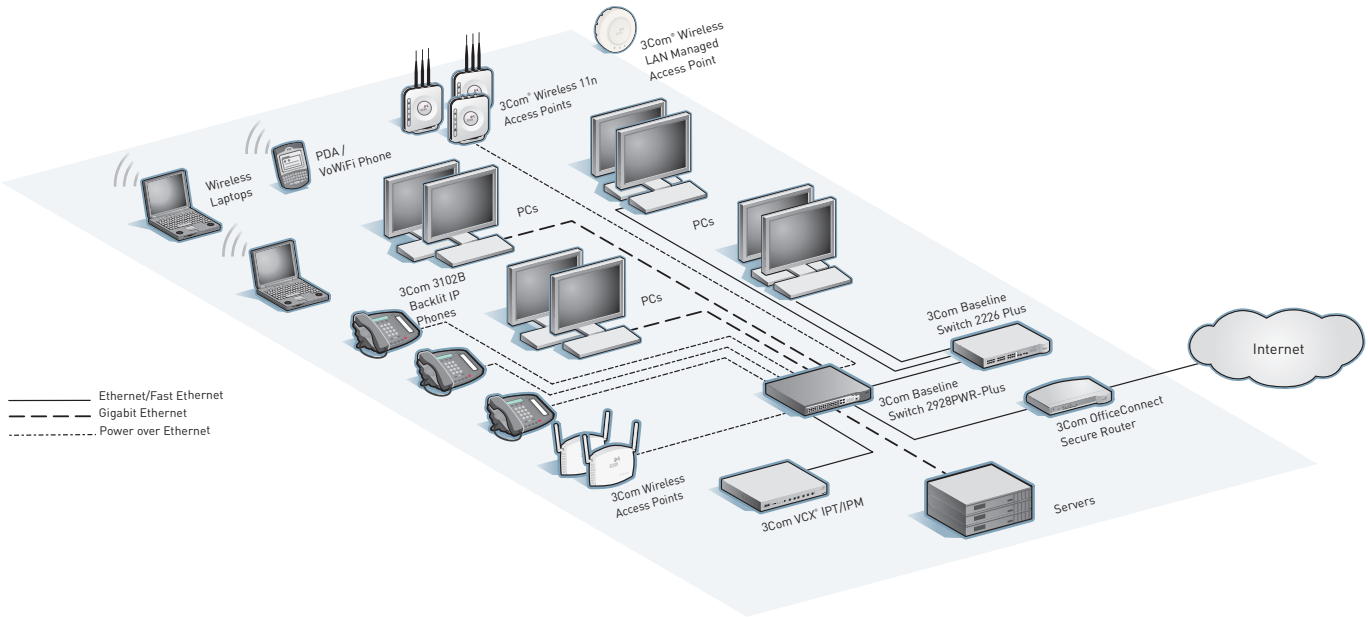


Device summary information for the Switch 2928 HPWR.



PoE summary information for the Switch 2928 HPWR.

BASELINE PLUS SWITCH 2928 PWR IN A CONVERGED NETWORK



VOICE READY NETWORK

3Com Voice Ready Networks provide an innovative and holistic approach to assessing, recommending and implementing a converged network, solving the most vexing challenges that confront IT managers as they deploy Internet Protocol (IP) telephony systems. With 3Com Voice Ready Networks, organizations can optimize network infrastructure for realtime voice and video traffic, ensure secure communications and protect business assets.

The Baseline Plus Switch 2900 Gigabit Family is an integral component of this approach, offering:

› Automatic assignment of voice traffic to separate VLANs

› IEEE 802.1p prioritization and 802.1Q VLANS

› Advanced QoS and rate limiting capabilities

› IEEE 802.1X authentication

› Power over Ethernet (PWR model only)

SPECIFICATIONS

Information in this section is relevant to all members of the 3Com Baseline Plus Switch 2900 Gigabit Family, unless otherwise stated.

CONNECTORS

Switch 2920
16 10BASE-T/100BASE-X/1000BASE-T
4 Gigabit SFP ports

Switch 2928
24 10BASE-T/100BASE-T/1000BASE-T
4 Gigabit SFP ports

Switch 2928 PWR
24 10BASE-T/100BASE-T/1000BASE-T
4 Gigabit SFP ports
PoE: 170W

Switch 2928 HPWR
24 10BASE-T/100BASE-T/1000BASE-T
4 Gigabit SFP ports
PoE: 365W

Switch 2952
48 10BASE-T/100BASE-X/1000BASE-T
4 Gigabit SFP ports

All switches
All copper ports are auto MDI/MDIX, auto-negotiating RJ-45
Front-mounted console port

PERFORMANCE

Switch 2920
40 Gbps switching capacity, max.
29.8 Mpps forwarding rate, max.

Switch 2928
56 Gbps switching capacity, max.
41.7 Mpps forwarding rate, max.

Switch 2928 PWR
56 Gbps switching capacity, max.
41.7 Mpps forwarding rate, max.

Switch 2928 HPWR
56 Gbps switching capacity, max.
41.7 Mpps forwarding rate, max.

Switch 2952
104 Gbps switching capacity, max.
77.4 Mpps forwarding rate, max.

All models
Wirespeed performance
Store-and-forward switching

LAYER 2 SWITCHING

8,192 MAC addresses in address table
256 port-based VLANs (IEEE 802.1Q)
IEEE 802.3ad Link Aggregation, automated (LACP) and manual aggregation: number of ports/2 trunks, 8 ports per trunk, max.
Auto-negotiation of port speed and duplex
Auto-voice VLAN for automatic vendor-independent segregation and prioritization of VoIP traffic
IEEE 802.3x flow control (half- and full-duplex)
IEEE 802.1D Spanning Tree Protocol (STP)
IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
Internet Group Management Protocol (IGMP) v1, v2 and v3 is supported
Jumbo frames (up to 10K bytes)
Multicast filtering
Convergence
4 hardware queues per port, with IEEE 802.1p Class of Service/Quality of Service (CoS/QoS) on egress
Weighted Round Robin queuing
Traffic prioritization at Layer 2 using 802.1p QoS, and at Layer 3 using Type of Service (TOS) with Differentiated Services Code Point (DSCP)
Ingress/egress rate limiting
Auto VLAN assignment for voice traffic determined by vendor OUI
CoS remarking for prioritization of VoIP traffic

LAYER 3 SWITCHING

Static routes: 32
Virtual VLAN interface: 8
DHCP relay
ARP entry: 256

SECURITY

IEEE 802.1X Network login
Access Control Lists (ACLs)
MAC-based Layer 2 filtering rules:
- source/destination address
- Ethertype
- CoS
- VLAN

IP-based Layer 3 filtering rules:
- protocol
- source/destination address
- TCP/UDP port
- DSCP value
- IP precedence

Management communications are encrypted via HTTPS

POWER OVER ETHERNET

Switch 2928 PWR
IEEE 802.3af
170W

Switch 2928 HPWR
IEEE 802.3af
365W

Note: Both switches support pre-std IEE 802.3at std.
This enables the switch to deliver 30W per port

MANAGEMENT

Web-based configuration and management
System configuration with SNMP v1, v2c and v3
- Support Remote Monitoring (RMON) alarm, event and history recording
- Support system log
- Support hierarchical alarms
- Support NTP

Support power, fan, and temperature alarms
Support for IMC our next generation Network Management platform
CLI via console
Management communications are encrypted via HTTPS

LED INDICATORS

Module active, power, network traffic mode, link status/speed

AT-A-GLANCE TRAFFIC MONITORING

Ports: active, enabled, disabled
Modules: present, active

POWER SUPPLY

Switch 2920
Current rating: 0.8A
Voltage: 100V-240V AC, 50/60Hz
Power consumption max: 25.1W
Power dissipation: 85.64 BTU/hr max

Switch 2928
Current rating: 0.8A
Voltage: 110V-240V AC, 50/60Hz
Power consumption max: 31.5W
Power dissipation: 107.48 BTU/hr max

Switch 2952
Current rating: 1.2A
Voltage: 100V-240V AC, 50/60Hz
Power consumption max: 59.8W
Power dissipation: 204.04 BTU/hr max., this power includes 4 SFP modules

Switch 2928 PWR
Current rating: 2.9A
Voltage: 100V – 240V AC, 50/60Hz
Power consumption max for Ethernet switching: 45W
PoE Budget: 170W
Power consumption for PoE: up to 170W + 25% overhead
Power dissipation: 290.08 BTU/hr max

Switch 2928 HPWR
AC source
Current rating: 8A
Voltage:100V - 240V AC, 50/60Hz
Power consumption max for Ethernet Switching: 67W
PoE Budget: 365W
Power consumption for PoE: up to 365W + 25% overhead
Power dissipation: 539.11 BTU/hr max
DC source – RPS1000-A3
Current rating: 20A
Voltage: -52V to -55V DC
PoE Budget: up to 740W
Power consumption with full PoE: 832W

All switches
Power inlet: IEC 320

DIMENSIONS

Switch 2920
Height: 4.36cm (1.72in)
Width: 44cm (17.32in)
Depth: 16cm (6.3in)
Weight: 3kg (6.61lb)

Switch 2928
Height: 4.36cm (1.72in)
Width: 44cm (17.32in)
Depth: 16cm (6.3in)
Weight: 3kg (6.61lb)

Switch 2952
Height: 4.36cm (1.72 in)
Width: 44cm (17.32 in)
Depth: 22cm (10.24 in)
Weight: 5kg (11.02 lb)

Switch 2928 PWR
Height: 4.36cm (1.72 in)
Width: 44cm (17.32 in)
Depth: 42cm (16.54 in)
Weight: 7kg (15.43 lb)

Switch 2928 HPWR
Height: 4.36cm (1.72 in)
Width: 44cm (17.32 in)
Depth: 42cm (16.54 in)
Weight: 7kg (15.43 lb)

ENVIRONMENTAL REQUIREMENTS

Operating temperature: 0° to 45°C (32° to 113°F)
Operating humidity: 10 to 90% (non-condensing)
Standard: EN 60068 (IEC 68)

REGULATORY AND AGENCY APPROVALS

Safety: UL 60950-1, EN 60950-1, CSA 22.2 60950-1, IEC 60950-1
Emissions: EN 55022 Class A, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, CISPR22 Class A, ICES-003 Class A, VCCI Class A
Immunity: EN 55024

IEEE STANDARDS SUPPORTED

IEEE 802.1d Spanning Tree
IEEE 802.1p Priority Tags
IEEE 802.1Q VLANs
IEEE 802.1X Port Security
IEEE 802.1w Rapid Spanning Tree
IEEE 802.3 Ethernet
IEEE 802.3ab Gigabit Ethernet
IEEE 802.3ad Link Aggregation
IEEE 802.3af Power over Ethernet (Switch 2928 PWRand Switch 2928 HPWR only)
IEEE 802.3u Fast Ethernet
IEEE 802.3x Flow Control
IEEE 802.3z Gigabit Ethernet
ISO 8802-3

PACKAGE CONTENTS

Switch unit, power cord, self-adhesive rubber pads, console cable, rack-mount kit, product CD, warranty and safety information flyer

WARRANTY AND OTHER SERVICES

Three Year Limited Hardware Warranty
Limited Software Warranty for 90 days
Advance Hardware Replacement with Next Business Day shipment in most regions
90 days of telephone technical support
Refer to www.3com.com/warranty for details.

ORDERING INFORMATION

PRODUCT DESCRIPTION	3COM SKU
3Com Baseline Plus Switch 2920	3CRBSG2093
3Com Baseline Plus Switch 2928	3CRBSG2893
3Com Baseline Plus Switch 2928 PWR	3CRBSG28PWR93
3Com Baseline Plus Switch 2928 HPWR	3CRBSG28HPWR93
3Com Baseline Plus Switch 2952	3CRBSG5293
REDUNDANT POWER SUPPLY (FOR 3CRBSG28HPWR93 ONLY)	
3Com H3C RPS 1000	0213A01S

PRODUCT DESCRIPTION	3COM SKU
TRANSCEIVERS	
3Com 1000BASE-SX SFP	3CSFP91
3Com 1000BASE-LX SFP	3CSFP92
3Com 1000BASE-SX SFP	0231A562
3Com 1000BASE-LX SFP	0231A563
3Com 1000BASE-LH40 SFP	02312170
3Com 1000BASE-LH40 SFP	02312172
3Com 1000BASE-LH70 SFP	02312173
3Com 1000BASE-T SFP	0231A085

Visit www.3com.com for more information about 3Com network solutions.

3Com Corporation, Corporate Headquarters, 350 Campus Drive, Marlborough, MA 01752-3064
3Com is publicly traded on NASDAQ under the symbol COMS.

Copyright © 2010 3Com and the 3Com logo are registered trademarks in various countries worldwide of 3Com Corporation. All other company and product names may be trademarks of their respective companies. While every effort is made to ensure the information given is accurate, 3Com does not accept liability for any errors or mistakes which may arise. All specifications are subject to change without notice.

401206-004 04/10